

Havlíček, M.; Klimyk, A. U.; Pošta, S.

Central elements of the algebras $U'_q(\mathfrak{so}_m)$ and $U_q(\mathfrak{iso}_m)$. (English) Zbl 0977.22005

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Summary: The aim of this paper is to give a set of central elements of the algebras $U'_q(\mathfrak{so}_m)$ and $U_q(\mathfrak{iso}_m)$ when q is a root of unity. They surprisingly arise from a single polynomial Casimir element of the algebra $U'_q(\mathfrak{so}_3)$. It is conjectured that the Casimir elements of these algebras under any values of q (not only for q a root of unity) and the central elements for q a root of unity derived in this paper generate the centers of $U'_q(\mathfrak{so}_m)$ and $U_q(\mathfrak{iso}_m)$ when q is a root of unity.

MSC:

22E45 Representations of Lie and linear algebraic groups over real fields: analytic methods

Cited in 5 Documents

Keywords:

single polynomial; Casimir element; root of unity

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